

REMARKS

By this amendment, claims 1, 6, 7 and 14 have been amended. Claims 5 and 11 have been previously withdrawn and claims 2, 3, 8 and 9 have been previously cancelled. Accordingly, claims 1, 4, 6, 7, 10 and 12-14 are currently pending in the application, of which claims 1, 7 and 14 are independent claims.

In view of the above amendments and the following Remarks, Applicants respectfully request reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

Claim Objection

In the Office Action, Claims 1, 6 and 14 were objected to for several informalities therein. This objection is respectfully traversed.

Claim has been amended to replace “a predetermined second portion” with --a second predetermined portion--. Claim 6 has been amended to replace “flow of first heat-exchanged air” with --a flow of heat-exchanged air--. Claim 14 has been amended to replace “the heat exchanging device” with ---a heat exchanging device-- in line 2, and to replace “the first heat-exchanged air form the blower” with --the heat-exchanged air from the blower to the at least one air outlet--. Accordingly, Applicants respectfully request withdrawal of the objection for claims 1, 6 and 14.

Rejections Under 35 U.S.C. §102

Claims 1, 4, 6, 7, 10 and 12-14 stand rejected under 35 U.S.C. §102(b) as being anticipated by U. S. Patent No. 2,162,152 issued to Wulle (“Wulle”). Applicants respectfully traverses this rejection for at least the following reasons.

The present Invention has the characteristic feature in that the blower is disposed between the first predetermined portion and the second predetermined portion so that heat-exchange is carried out in twice. Namely, the first heat-exchange of air is carried out at the first predetermined portion and then the heat-exchanged air is blown by the blower and then the second heat-exchange of air is carried out at the second predetermined portion.

That feature of the present invention has advantages. The volume of the heat exchanger of the present Invention can be decreased while the heat exchange capacity of the present invention is not decreased. Namely, the efficiency of the heat-exchange of the present invention is higher than the efficiency of the heat-exchange of the prior art on condition that the present invention and prior art have the same volume. Therefore, the heat exchanger of the present invention has compact structure, so that heat exchanger of the present invention is appropriate for automobile air conditioner and the efficiency of the heat-exchange is high.

Wulle discloses the blower (14) and the assembly of coils (17) (or tempering core(12)) which has inside portion and outside portion. The blower (14) of Wulle is positioned at inner part of the inside portion of the assembly of coils (17) (see Fig. 2), therefore, inside portion and outside portion of the assembly of coils (17) (or tempering core (12)) surround the blower (14). In result, the volume of Wulle’s heat exchanger increases and efficiency of the heat-exchange of Wulle’s heat exchanger is low, so that Wulle’s heat exchanger is not appropriate for automobile air conditioner and Wulle’s heat exchanger is different from the present invention.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §102(b) rejection of claims 1, 4, 6, 7, 10, 12-14.

Claims 1, 4, 6, 7, 10 and 12-14 stand rejected under 35 U.S.C. §102(b) as being anticipated by Japanese Patent Publication No. 59-149819 issued to Shiraki Kinzoku Kogyo K.K. (“Shiraki”). Applicants respectfully traverses this rejection for at least the following reasons.

Examiner indicated that the one side of the heat pipe 12b of Shiraki is the same as the second (or first) predetermined portion of present invention. However, the room 13 in which the one side of the heat pipe 12b is positioned is separated from the room 3, 4, 5, so that air passageways are separated too.

Namely, if air blown from air inlet 1 passes through filter 6, dust collector 7, etc., the air passes through air passageway 4 and then the air has heat-exchange only at the other side of the heat pipe 12a and then the heat-exchanged air pass through fan 10. In this case, the air does not pass the one side of the heat pipe 12b, therefore heat-exchange is carded out only once. (See Fig. 1 and Fig. 2)

In the mean time, if air blown from air inlet 1 passes through pipe 15, the air has heat-exchange only at the one side of the heat pipe 12b and then the heat-exchanged air pass through fan 14. In this case, the air does not pass the other side of the heat pipe 12a, therefore heat-exchange is carried out only once. (See Fig. 1 and Fig. 2).

Namely, the one side of the heat pipe 12b of Shiraki is not the same as the second (or first) predetermined portion of present invention, and Air cleaner of Shiraki does not disclose the present invention.

Therefore, Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §102(b) rejection of claims 1, 4, 6, 7, 10, 12-14.

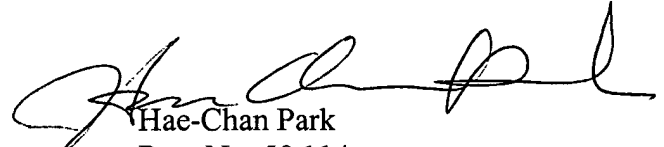
CONCLUSION

Applicants believe that a full and complete response has been made to the pending Office Action and respectfully submit that all of the stated objections and grounds for rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicants' undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,



Hae-Chan Park
Reg. No. 50,114

Date: August 17, 2004

McGuireWoods LLP
1750 Tysons Boulevard
Suite 1800
McLean, VA 22102-4215
Tel: 703-712-5365
Fax: 703-712-5280
HCP:WSC/gjb

\\COM\438772.1